

vation in its upper, and a shallower one in its lower portion. Similar excavations exist in the three other segments, by which three fenestra of a rounded shape are formed.

There are five articulating surfaces on each side for the sternal ribs—the first near the upper portion of the first segment, the second at the junction of the first and second segments, the third at the junction of the second and third segments, the fourth at the junction of the third and fourth segments, and the fifth at each side of the fourth segment on its lower portion.

#### *Pectoral Limb.*

The scapula is remarkably flat, and without prominent ridges, so that there is scarcely any sign of the postscapular fossa. In form it resembles that of *Mesoplodon sowerbiensis*. The acromion is broad, and has an upward slope in its anterior portion; the coracoid is flat and narrow, but widens considerably at its extremity, where it assumes a prismoid form.

The humerus, ulna, and radius resemble also considerably those of *M. sowerbiensis*. The epiphyses on both extremities are so well ankylosed that scarcely the line of junction can be traced.

The elements of the carpus are, with the exception of the magnum and trapezoid, which are united into one bone, all separate, thus resembling also *M. sowerbiensis* and the New-Zealand *Epidon*. The same appears to be the case with the digits, which, however, have somewhat suffered, as the pectoral fin had been much lacerated before the skeleton was secured.

#### *Pelvic Bone.*

The pelvic bone for the attachment of the crura of the penis is of small size, and of rather irregular form. It is 4 inches long, 0.37 inch broad near both extremities, and 0.25 inch in the middle portion. It is rounded posteriorly and flat anteriorly, getting gradually flatter as we reach the lower end of the bone. It is very light and spongy.

#### 4. Remarks upon Dr. von Haast's Communication on *Mesoplodon floweri*. By PROFESSOR FLOWER, F.R.S.

On comparing the excellent photograph sent by Dr. v. Haast of of the skull of this animal with the type specimen of *M. layardi*, from the Cape of Good Hope, in the British Museum, neither Professor Van Beneden nor myself could detect any differences of the slightest specific importance; indeed at first sight we were inclined to say that the photographs might have been taken from that very specimen. The latter, however, is a trifle larger in all its dimensions, being an inch and a quarter longer; and the teeth are rather more developed, probably the effect of somewhat greater age.

The distinctions upon which Dr. v. Haast relies are chiefly the result of the comparison of the skull with a small figure of *M. layardi* quite inadequate for the purpose, and disappear on more rigid examination. For instance, the proportion of the height to the length of the lower jaw, one of Dr. v. Haast's most telling characters, is really identical, instead of being so widely different as supposed. The habitats of the two specimens, instead of being a reason for separating, would rather, in my opinion, be one for uniting them, as there can be no possible barrier for a Cetacean between the seas of the Cape and those of New Zealand. I am therefore unable, upon the evidence before us, to accept *Mesoplodon floweri* as a well-established species. The great interest of the present communication is that it contains a description of the entire skeleton, and shows that it presents an exceedingly close resemblance to the well-known Northern form, *M. sowerbiensis*.

### 5. On *Mystacina tuberculata*.

By G. E. DOBSON, M.A., M.B., F.L.S., &c.

[Received May 13, 1876.]

There are some important points in the external structure of that most remarkable species of Bat, *Mystacina tuberculata* of New Zealand, which have not yet been noticed, although one writer has occupied four closely printed pages of an octavo book in describing it.

In a paper by Mr. R. F. Tones, in our 'Proceedings' for 1857, p. 139, a coloured lithograph of this species is given, showing the very peculiar structure of a portion of the wing- and interfemoral membrane near the body; and in the text accompanying it are the following remarks:—"The portions of membrane contiguous to the forearm, the sides of the body, and the tibia are very thick and leathery, with numerous deep wrinkles; and the basal half of the interfemoral membrane (as far as to where the tail becomes free) possesses the same peculiarity. The wrinkles, in many places, cross the legs and forearms, but they are only observable on the upper surfaces of the membranes and limbs. This singular part of the cutaneous system is marked by a regular and decided outline, and can scarcely be said at any place to graduate into the smooth (and very thin) membrane of the wings. Its extent is pretty well indicated by the hairy portions of the membranes in the genus *Lasinurus*, excepting that it only occupies one half of the interfemoral membrane."

No conjectures are hazarded as to the use of this peculiarly thickened and differently coloured portion of membrane, which occurs in this species alone.

I find that this thickened portion of the wing-membrane is analogous to the thickened portion of the anterior wings in *Hemiptera* and to the elytra of the *Coleoptera*.

Among the many peculiarities of structure presented by *M. tuber-*